TOSHIBA INSTALLATION MANUAL Model:TCB-PCDM4E

Power peak-cut control board

Precautions for Safety

- Read these “Precautions for Safety” carefully before installation work.
- The precautions described below include important items regarding safety. Observe them without fail.Understand the following details (indications and symbols) before reading the body text, and follow the instructions.

The meanings of indications

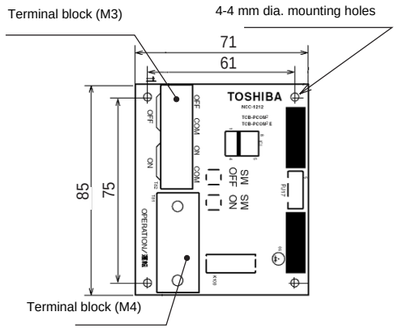
⚠ WARNING	Text set off in this manner indicates that failure to adhere to the directions in the warning could result in serious bodily harm or loss of life if the product is handled improperly.
⚠ CAUTION	Text set off in this manner indicates that failure to adhere to the directions in the caution could result in serious bodily injury or damage to property if the product is handled improperly.

- After completion of installation, perform trial operation to check for any problems. Explain method of use and maintenance to the customer by following the descriptions in the manual. Ask customer to keep this Manual at accessible place for future reference.

⚠WARNING

- **Only a qualified installer or qualified service person is allowed to do installation work. If installation is carried out by an unqualified individual, fire or electric shock may result.**
- **Perform installation work reliably according to this installation manual. Incomplete installation may cause electric shock, fire or abnormal operation.**
- **Electrical work must be performed by a qualified installer or qualified service person in accordance with this installation manual. The work must satisfy all local, national and international regulations. Inappropriate work may result in electric shock or fire.**
- **Connect the specified wires firmly and clamp them securely so that external force applied to the wires does not affect the connector pins. Improper wire connection or clamping may result in fire or malfunction.**
- **Do not disassemble, modify, repair or move the product yourself. Doing so may cause fire, electric shock, injury or water leaks.**
- **Ask a qualified installer or qualified service person to do any repairs or to move the product.**

1 External View



2 Accessories

No.	Part Name		Q'ty
1	Connection cable		1
2	Support to fix the board		4
3	Wire clamp		1
4	Wire clamp fixing screw		1
5	Earth screw		2
6	Bindling band A		4
7	Clamp filter		3
8	Bindling band B		3

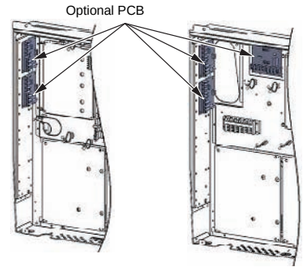
3 Installation

1. Before starting installation work, be sure to turn the power supply OFF.
2. Install the "optional PCB" at the position on the electrical components box shown in the figure below.
3. Install the "optional PCB" at the specified location inside the electrical components box using the support (2).
4. There are four mounting holes for the fixing support at specified locations inside the electrical components box.
5. Connect the connector (PJ17) on the "optional PCB" to the connector (CN513) on the "interface PCB" using the connection cable.
6. The connection cable is long. Tie it using the binding band (6).

[PCB Installation Position]

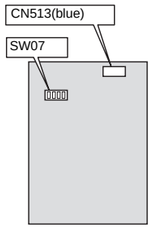
SMMS-i

MMY-MAP080 to 120 | MMY-MAP140 to 160

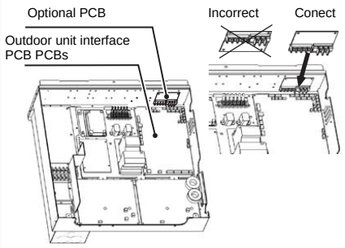


(max. number installed: 1 pc)

SMMS-i Connector Positions

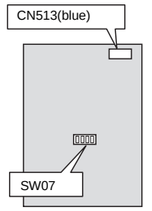


SMMS, SHRM

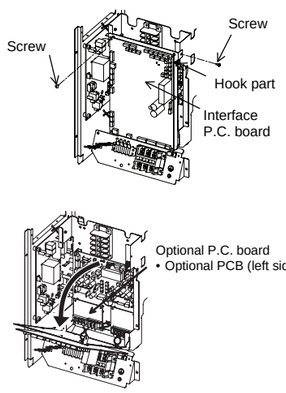


(max. number installed: 1 pc)

SMMS, SHRM Connector Positions



MiNi-SMMS

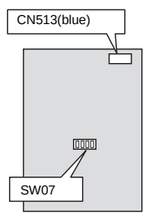


(max. number installed: 1 pc)

Install this optional P.C. board to the back side of the Interface P.C. board on outdoor unit.

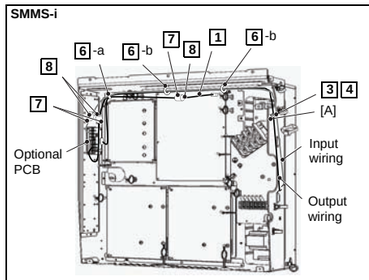
1. If the screw fo the position shown in the figure is removed and an upper right hook is slipped, an interface board will open.
2. Place this P.C. board by using the support of the electric component box. There are four installation holes to place the support of the electric component box.

MiNi-SMMS Connector Positions



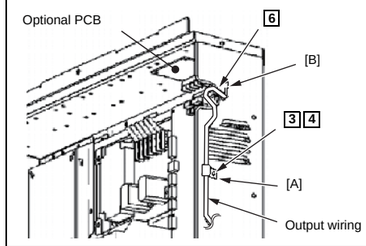
4 Wiring

SMMS-i



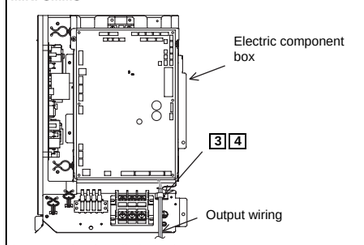
1. Tie the output wiring using the binding band A (6) at the position in the figure on the left. (6-a):Tie the output/input wiring togerther with other leads. (6-b):Tie the output/input wiring after passing the upper fixation hole on of the bandling band.
2. Attach the clamp filter (7) to the output wiring, input wiring and connection cable as shown in the figure. Use binding band B (8) to fix the clamp filter (7) to the wirings.
   * When more than one optional PC boards are installed, band all the connection cables and attach one clamp filter.
3. Fix the wire clamp (3) using the screw (4) holes at location [A] in the figure on the left.

SMMS, SHRM



1. Pass the binding band A (6) through securing hole [B] shown in the figure on the left and tie the output wiring together with other wiring.
2. Fix the wire clamp (3) using the screw (4) holes at location [A] in the figure on the left.

MiNi-SMMS



(max. number installed: 1 pc)

1. Tie the output wiring with the wire clamp (3).

5 Details of Operation

By switching SW07 (bit 2) on the outdoor unit interface PCB, super module multi (MMY-) supports both standard specifications (2-stage switching) and enhanced functions (4-stage switching).

⚠CAUTION

Specifications of display relay contact

- The terminal for display output ([Operation] terminal) must satisfy the following electrical rating.

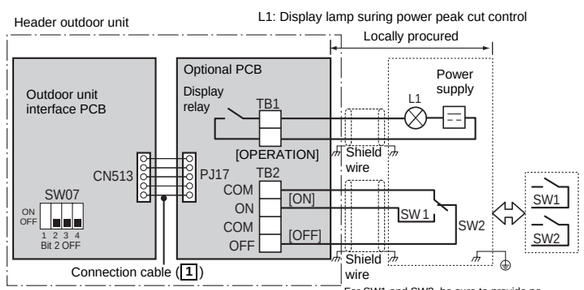
<Electrical Rating>
220 to 240 VAC, 10 mA or more, 1 A or less
24 VAC, 10 mA or more, 1 A or less (non-conductive load)

When connecting a conductive load (e.g. relay coil) to the display relay load, insert a surge killer CR (for an AC power supply) or a diode for preventing back electromotive force (for a DC power supply) on the bypass circuit.

▼ Electrical Wiring Diagram

Standard Specifications

(Wiring example)



For SW1 and SW2, be sure to provide no-voltage contacts for each terminal.
The input signals of SW1 and SW2 may be pulse input (100 msec or more) or continuous make.

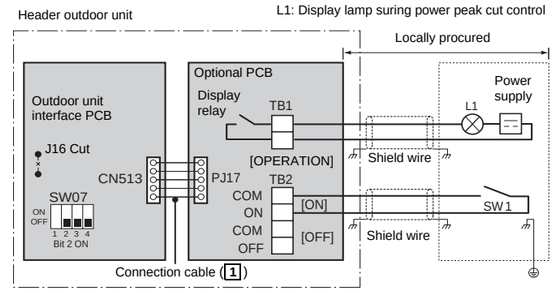
<SW07 (bit 2) OFF [2-stage switching]>

Input		SW07 (bit 1)		Display relay (L1)
SW1	SW2	Bit 1 OFF	Bit 1 ON	
OFF	ON	100% (normal operation)	100% (normal operation)	OFF
ON	OFF	0% (forced stop)	Approx. 60% (upper limit regulated)	ON

For one input function (This function is possible only on the SMMS-i)

Power peak-cut ON-OFF control is made possible on the SMMS-i on only the [ON] terminal input (SW1) by cutting the jumper lead (J16) of the center outdoor unit interface PCB.

(Wiring example)



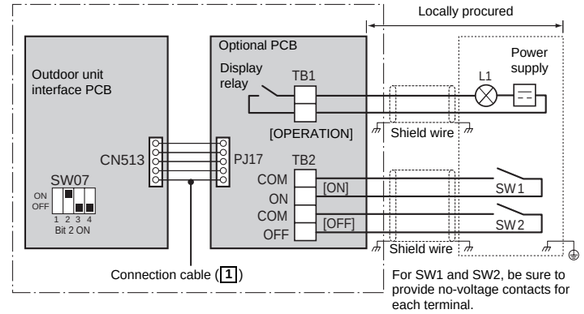
<SW07 (bit 2) OFF [2-stage switching]>

Power peak-cut control turns ON when SW1 in the wiring example is ON (continuous make).

Jumper lead J16	Input SW1	SW07 (bit 1)		Display relay (L1)
		Bit 1 OFF	Bit 1 ON	
Cut	OFF	100% (normal operation)	100% (normal operation)	OFF
	ON	0% (forced stop)	Approx. 60% (upper limit regulated)	ON

Enhanced Functions

(Wiring example)



For SW1 and SW2, be sure to provide no-voltage contacts for each terminal.

<SW07 (bit 2) ON [4-stage switching]>

Input		SW07 (bit 1)		Display relay (L1)
SW1	SW2	Bit 1 OFF	Bit 1 ON	
OFF	OFF	100% (normal operation)	100% (normal operation)	OFF
ON	OFF	Approx. 80% (upper limit regulated)	Approx. 85% (upper limit regulated)	ON
OFF	ON	Approx. 60% (upper limit regulated)	Approx. 75% (upper limit regulated)	ON
ON	ON	0% (forced stop)	Approx. 60% (upper limit regulated)	ON